

REC'D 08 JUL 2004

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INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PO104PCT/MCG	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/IE2004/000028	International filing date (day/month/year) 27/02/2004	(Earliest) Priority Date (day/month/year) 28/02/2003
Applicant GAS SENSORS SOLUTIONS LIMITED		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the title,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

OPTICAL CO2 AND COMBINED O2/CO2 SENSORS

5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the drawings,

- a. the figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☒ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International Application No

IE2004/000028

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G01N21/64

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

INSPEC, COMPENDEX, BIOSIS, EPO-Internal, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	<p>MCEVOY AISLING K ET AL: "Optical sensors for application in intelligent food packaging technology"</p> <p>OPTO-IRELAND 2002: OPTICS AND PHOTONICS TECHNOLOGIES AND APPLICATIONS; GALWAY, IRELAND SEP 5-6 2002, vol. 4876, no. 2, March 2003 (2003-03), pages 806-815, XP002285754</p> <p>Proc SPIE Int Soc Opt Eng; Proceedings of SPIE - The International Society for Optical Engineering 2002</p> <p>* the whole document *</p> <p style="text-align: center;">-/--</p>	1-31

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

° Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

24 June 2004

Date of mailing of the international search report

12/07/2004

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

International Application No

E2004/000028

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	VON BULTZINGSLÖWEN CHRISTOPH ET AL: "Sol-gel based optical carbon dioxide sensor employing dual luminophore referencing for application in food packaging technology." THE ANALYST. ENGLAND NOV 2002, vol. 127, no. 11, November 2002 (2002-11), pages 1478-1483, XP009032415 ISSN: 0003-2654	21,23, 26-28, 30,31
Y	* the whole document "	1-20,24
Y	DE 198 29 657 A (KLIMANT INGO DR) 4 February 1999 (1999-02-04) * page 3, line 7 - page 5, line 46 *	1-20,24
Y	KLIMANT I ET AL: "OXYGEN-SENSITIVE LUMINESCENT MATERIALS BASED ON SILICONE-SOLUBLE RUTHENIUM DIIMINE COMPLEXES" ANALYTICAL CHEMISTRY, AMERICAN CHEMICAL SOCIETY. COLUMBUS, US, vol. 67, no. 18, 15 September 1995 (1995-09-15), pages 3160-3166, XP000532341 ISSN: 0003-2700 * page 3161, left column, lower half *	13-15
Y	MACCRAITH B D ET AL: "FIBRE OPTIC OXYGEN SENSOR BASED ON FLUORESCENCE QUENCHING OF EVANESCENT-WAVE EXCITED RUTHENIUM COMPLEXES IN SOL-GEL DERIVED POROUS COATINGS" ANALYST, LONDON, GB, vol. 118, 1 April 1993 (1993-04-01), pages 385-388, XP000618792 * page 386, right column, second paragraph *	13-15
X	MALINS C ET AL: "MULTI-ANALYTE OPTICAL CHEMICAL SENSOR EMPLOYING A PLASTIC SUBSTRATE" MEASUREMENT SCIENCE AND TECHNOLOGY, IOP PUBLISHING, BRISTOL, GB, vol. 11, no. 8, August 2000 (2000-08), pages 1105-1110, XP001100329 ISSN: 0957-0233	21,22, 25-28, 30,31
Y	* page 1105, right column, last paragraph; page 1106, right column, lower half; figure 1 *	7-12

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INTERNATIONAL SEARCH REPORT

International Application No
IE2004/000028

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>WO 02/056023 A (LEINER M J P; KLIMANT I; PRESENS PRECISION SENSING GMBH (DE)) 18 July 2002 (2002-07-18) * page 4, lines 20-29; page 7, line 26 - page 8, line 8 *</p> <p style="text-align: center;">-----</p>	7-12

Information on patent family members

International Application No

PCT/E2004/000028

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 19829657	A	04-02-1999	DE 19829657 A1	04-02-1999
			AT 239912 T	15-05-2003
			DE 59808290 D1	12-06-2003
			DK 1000345 T3	02-06-2003
			WO 9906821 A1	11-02-1999
			EP 1000345 A1	17-05-2000
			JP 2001512236 T	21-08-2001
			US 6602716 B1	05-08-2003
WO 02056023	A	18-07-2002	DE 10101576 A1	12-09-2002
			WO 02056023 A1	18-07-2002